IN THE CLAIMS:

Sub A> Claims 1-15 (Previously cancelled)

DO NOT ENTER
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16. (Currently amended) In a method of producing a ball-and-socket joint (1) between a slipper (3) and a piston (2) of a piston machine, including the steps of:

a) configuring the slipper (3) with a joint ball (4) at an end opposite a bottom surface (21) thereof;

b) configuring the piston (2) at an oversized dimension (x) on a lateral surface (2c) and with a hemispherical joint recess (5) having a free recess edge (7) protruding beyond the maximum diameter (6) of the joint recess (5) at one end of the piston (2);

C1 c) and finishing the lateral surface (2c) of the piston (2); the improvement comprising:

d) inserting the joint ball (4) into the joint recess (5) after finishing the lateral surface (2c) of the piston (2) as set forth in step c):

e) locally heating the free recess edge (7) to a temperature reducing the hardness of the material thereof; and

f) hot-beading the free recess edge (7) into a ~~cylindrically~~ circumferentially converging configuration for confining said joint ball (4) within said joint recess (5).

17. (Currently amended) In a method producing a ball-and-socket joint (1) between a slipper (3) and a piston (2) of a piston machine, including the steps of:

a) configuring the piston (2) at an oversized dimension (x) on a lateral surface and with a joint ball (4) at one end thereof;

b) configuring the slipper (3) with a hemispherical joint recess (5) having a free recess edge (7) protruding beyond the maximum diameter (6) of the joint recess (5);

c) and finishing the lateral surface (2c) of the piston (2); the improvement comprising:

d) inserting the joint ball (4) into the joint recess (5) after finishing the lateral surface (2c) of the piston (2) as set forth in step c):

~~e~~ e) locally heating the free recess edge (7) to a temperature reducing the hardness of the material subsequent to insertion of said joint ball (4) into said recess (5); and

~~d~~ f) hot-beading the free recess edge (7) into a circumferentially converging form in which said recess edge positively grips the joint ball (4) to inhibit egress of said joint ball from said joint recess.

C' (cont.)

18. (Currently amended) A method according to Claim 16 or 17, wherein preceding finishing the lateral surface (2c) of the piston (2), the lateral surface (2c) is selectively nitrided, hardened, or gas-nitrided.

19. (Previously added) A method according to Claim 16 or 17, wherein the free recess edge (7) is hot-beaded into a conical form converging towards the free edge thereof.

20. (Currently amended) A ball-and-socket joint (1) forming a connection between a piston (2) and a slipper (3) of a piston machine; said joint (1) comprising:

a) a hemispherical joint recess (5) having a free recess edge (7) provided at one end of said piston (2);

b) a spherical joint ball (4) on said slipper (3) being pivotably mounted in said joint recess (5);

c) ~~and~~ a free recess edge (7) of the joint recess (5) having been hot-beaded into a condition ~~changing the material properties~~ reducing the hardness of the joint recess (5) for converging said free recess edge into a configuration ~~confirming~~ with the outer lateral surface thereof converging conically towards the free recess edge confining said spherical joint ball within said joint recess~~.~~;

d) wherein said piston (2) is constituted of a hardened steel; and

e) wherein said steel is hardened through nitriding.

Claims 21 and 22 (Cancel).

23. (Currently amended) A ball-and-socket joint (1) forming a connection between a piston (2) and a slipper (3) of a piston machine, said joint (1) comprising:

a) a hemispherical joint recess (5) having a free recess edge (7) provided on said slipper (3);

b) a spherical joint ball (4) formed on an end of said piston (2) being pivotably mounted in said joint recess (5),

c) said free recess edge (7) of the joint recess (5) having been hot-beaded into a condition ~~changing the material properties~~ reducing the hardness of said joint recess for converging said free recess edge into a configuration with the outer lateral surface thereof converging conically towards the free recess edge, confining said spherical joint ball within said joint recess~~.~~;

d) wherein said piston (2) is constituted of a hardened steel; and

e) wherein said steel is hardened through nitriding.

Claims 24 and 25 (Cancel)

26. (Previously added) A ball-and-socket joint according to Claim 23, wherein said slipper (3) is constituted of a high-strength metal.

27. (Previously added) A ball-and-socket joint according to Claim 26, wherein said metal comprises steel.

28. (Previously added) A ball-and-socket joint according to Claim 27, wherein said slipper (3) includes a base surface (21) opposite said spherical joint ball (4), a recess (8b) being formed in said base surface, and a plate-shaped insert (8a) possessing high sliding properties being mounted in said recess.

29. (Previously added) A ball-and-socket joint according to Claim 28, wherein said insert (8a) is constituted of bronze or brass.